REMARKS

Claims 1-53 of the application, of which claims 31-52 are withdrawn, are presently pending. Claims 1 and 50 are the only independent claims in the non-withdrawn claims.

In the Office Action dated July 13, 2004, the Examiner objects to claims 11-30 and states that they have not been examined on the merits because the claims are multiple dependent claims that depend from multiple dependent claims. Applicants traverse the objection and note that in a preliminary amendment filed together with the national filing of the present application, all multiple dependencies are removed. A copy of the preliminary amendment is attached hereto. Applicants respectfully request that the Examiner retract his objection to claims 11-30 and address their patentability in a next office action.

Claims 1-10 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,806,520 to Berger in view of U.S. 4,819,753 to Higo. The Examiner notes that Berger "fails to show first and second bones as being analyzed with respect to the velocity of a sound wave through the bone" but that "Higo discloses a functional evaluation device that shows analyzing the acoustics of two bones". The Examiner concludes that therefore it would have been obvious to one of ordinary skill in the art "to use two bone measurements as taught by Higo with the device of Berger so the joint between two bones can be analyzed. Applicants respectfully traverse the rejection and submit that the Examiner has not established a prima facie case of obviousness.

Claim 1 of the application claims a method in which an acoustic wave is transmitted from a location adjacent a first bone and received at a location adjacent a second bone to determine at least one characteristic of bone that includes an acoustic velocity in the bone.

Berger describes a method for "evaluation and characterization of the mechanical or architectural properties of bones" (e.g. Abstract) which includes propagation velocity of sound in bone (*e.g.* column 2 line 55). Higo on the other hand describes a device for evaluating functional degradation of an artificial device buried in a living body (e.g. Abstract), which uses frequencies of sound to evaluate the artificial device, *not a characteristic of bone or a velocity of sound in bone*. Higo uses velocity of sound in bone as an input to determine locations in the body at which sounds at the frequencies measured by Higo originate.

Not only do neither Berger nor Higo express explicitly or implicitly a motivation for combining their respective teachings but, since they perform substantially different tasks in

substantially different ways they must be interpreted as teaching away from such a motivation.

Finally, whereas both Berger and Higo explicitly show and describe performing a measurement of the velocity of sound in bone, they both show and describe the measurement being performed for a propagation path of sound in a region of *a same single bone*. Neither of the documents describes nor hints at the usefulness of performing such a measurement for a path that passes through more than one bone. Therefore, even were a motivation found for combining Berger and Higo, the combination would not provide the invention claimed in claim 1.

In view of the above, it must be concluded that Berger and Higo do not, and cannot, support a prima facie rejection of claim 1.

Independent claim 50 of the application recites limitations that are different from the limitations recited in claim 1. The examiner has not addressed these different limitations in any manner. Applicants therefore respectfully submit that the Office Action does not present a prima facie case of obviousness against claim 50.

In summary applicants submit that claims 1 and 50, the only independent claims examined, are patentable over the cited prior art and that the dependent claims in the claim set are patentable at least through their dependence on the independent claims.

Respectfully submitted,
E. KANTOROVICH, et al.

Allan C. ENTIS
Reg. # 52,866

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William H. Dippert, Esq.
Reed Smith LLP
599 Lexington Avenue, 29th Floor
New York, NY 10022-7650

Tel: (212) 521-5400